Research Note 85-61

ENHANCEMENTS TO MOTIVATIONAL SKILLS TRAINING FOR MILITARY TECHNICAL TRAINING STUDENTS: PHASE I EVALUATION

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Dr. Richard P. Kern, contracting officer's representative and technical monitor for this project. This research, reported in two volumes, is one of five learning strategy research projects performed under the research component of the Basic Skills Resource Center contract.

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This research note is part of the Basic Skills Resource Center research component, and was undertaken to design and evaluate the effectiveness of Computer Assisted Instruction (CAI) enhanced versions of the Motivational Skills Training Program. This report describes the technology-based CAI enhancements, and the results of an experimental examination of the skills training program. Recommendations for implementation in Army technical programs are also discussed. (See also Phase II Evaluation, RN 85-62.)

FOREWORD

The Instructional Technology Systems Technical Area of the U.S. Army Research Institute for the Behavioral and Social Sciences directs research in learning strategies applications with a special focus on educational technology and links to military education and training. These research and development efforts are aimed at the overall improvement of the Army's Basic Skills Education Program.

This research effort included the design and development of CAI enhancements for the Motivational Skills Training Program. This report describes the results of an evaluation of the effectiveness of the technology-based instruction and identifies recommendations for implementation of the training program within Army technical training efforts. Overall, this effort was undertaken to explore procedures to remedy motivational deficiencies related to unsatisfactory performance in military technical training and to determine if microcomputer-based instruction might be used to offset or reduce instructor requirements associated with motivational training.

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Executive Summary

Problem

Inadequate student performance in military technical training is a continuing problem for all branches of the service, despite the many recent improvements that have been made in technical training curricula and training methods. Such submaximal performance inevitably results in increased training costs because of increased training time and delays in student progress through the training pipeline. One factor that has been found to contribute to students' poor academic performance is skill deficiencies of an attitudinal or motivational nature. These skill deficiencies can be characterized as consisting of negative orientations toward learning as well as inadequate self-management and self-control skills which are required if students are to take responsibility for their own learning process. A skill training program for remedying these deficiencies, the Motivational Skills Training Program, has been developed and evaluated with Air Force trainees. Evaluation findings indicated that trainees liked the program and found it helpful in both their course work and personal lives, and trainees participating in the program had significantly higher block test scores and lower block test failure rates than control group trainees. These findings were thus seen as suggestive of the possible impact of this type of motivational skills training on trainee performance and attrition in technical training.

The existing Motivational Skills Training Program includes seven self-instructional, printed modules which were originally implemented in an instructor-led, small group format that provided trainees with the opportunity to practice new strategies and skills, share experiences, and develop feelings of rapport with their instructors and fellow trainees. Given this implementation format, it was

not possible to determine if part of the success of the program—in addition to the instructional materials themselves—was due to the group experiences or to the presence of trained instructors who facilitated trainee acquisition and maintenance of strategies and skills. The present research was, therefore, undertaken by the Army Research Institute to address these issues and explore whether the cost effectiveness of the program could be enhanced by reducing instructor and/or group interaction requirements through the use of computer-assisted instruction (CAI) for selected portions of the training.

Purpose

This is the first of two technical reports describing activities in the two phases of this project, respectively. The goals of Phase I were to determine the separate contribution of instructor augmentation and group experiences to program effectiveness and to identify specific CAI enhancements for those skill training components which benefited from instructor augmentation and group experiences. This report describes the results of an experimental study and conceptual analysis directed at accomplishing these goals, and discusses implications for the design of CAI enhancements to the Motivational Skills Training Program to be developed and evaluated in Phase II of this project.

Approach

It was originally intended that the goals of Phase I be accomplished through results obtained in an experimental study which explored the relative effectiveness of the printed modules under conditions of varying instructor and group augmentation. A number of difficulties with data collection, however, necessitated that the selection and design of CAI enhancements be based on a

contractor analysis of the Motivational Skills Training Program. Since the experimental study did result in some implications regarding the importance of the instructor and group experiences for this type of skill training, the approach and results from this study as well as the conceptual analysis are described in this report.

The design for the experimental study consisted of four conditions: a printed modules only (MO) condition, a modules plus instructor introductions (MI) condition, a modules plus instructor introductions and group discussions (MID) condition, and a no training control (C) condition. Participants in the study were male and female students scheduled to begin the Weapons and Armament School at Lowry Air Force Base during the period of 21 January through 1 July 1983. Students were assigned to one of the four experimental conditions by designated student squadron personnel following their arrival on base. Although it was originally planned to collect data on at least 50 students per condition, reductions in the number of students entering the Weapons and Armament School during the period of the study and problems in scheduling students for the skill training necessitated both a longer time period for the study and a reduction in the number of students able to participate. When the study was concluded, data were available on 28 students in the MO condition, 17 students in the MI condition, 23 students in the MID condition, and 52 students in the C condition. Data available for analysis at the conclusion of the experimental study included (a) pretreatment student differences by condition in ASVAB scores, education level, self-efficacy scores, and stress profile scores on eight subscales; and (b) posttreatment student differences by condition in block test scores for Blocks 1 through 6, percentage of students eliminated from the Weapons and Armament course, and percentage of

students who had failed and been retested at the end of Blocks 2 and 6 of the course.

The goals of the conceptual analysis were to (a) identify general roles and functions of the instructor and group experiences in facilitating student acquisition of concepts and skills in the motivational program, (b) select those roles and functions which lent themselves to a CAI format or could be easily simulated in this format, and (c) extend the general roles and functions identified into specific design guidelines for each of the seven modules in the motivational program. Procedures used to accomplish these goals were to (1) interview the two graduate research assistants reponsible for the conduct of the training, (2) synthesize interview results and identify areas of agreement, and (3) produce design guidelines for CAI introduction and practice segments which included general descriptions of content and strategies to be used and estimates of lengths for each of the CAI segments.

Findings

Primary findings in the experimental study were that students in the control group did not differ from students in the experimental groups on pretreatment measures and on end-of-block test scores for the first six blocks of the Weapons and Armament course. The number of students eliminated from the course, however, was highest for the control and MO conditions, with no students eliminated in the MI and MID conditions. In addition, the test failure rates by the end of Block 6 were lowest for students in the MID condition. These findings suggest that instructor and group experiences enhance the subsequent effectiveness of the Motivational Skills Training Program, with implications for student performance and attrition in technical training.

The conceptual analysis of instructor roles in the motivational training led to the definition of three primary roles that could be provided by the computer: modeler, motivator, and facilitator. A character named "PC" was defined to personalize and enact these roles. The analysis of the roles and functions of the group experiences indicated that facilitative functions included peer identification, opportunities for shared problem solving, and peer modeling and feedback. A set of military characters was defined to personalize these group functions and represent specific personal responsibility/self-control problems related to each module's content area. The CAI guidelines that were developed specified the use of PC and the set of group characters in CAI introductions to the program and each module and in CAI practice sessions at the end of each module. It was determined that introductory segments would be approximately 10 minutes each and the practice segments would be approximately 15 minutes each, for a total of about 2½ hours of CAI.

Findings from both the experimental study and contractor analysis suggest the importance of personalization and the need for simulation of instructor and group functions within a "rich" training medium. For students to identify with and sense the human qualities of the defined instructor and group characters, both interactive visual and audio capabilities appear necessary. To provide these capabilities within the cost constraints and practicalities of this project, a simple computer-controlled audio capability is believed to be adequate for providing the personalization and human simulation of the instructor and group functions. Initial tasks in the second phase of this project are, therefore, to locate or develop an audio interface for the selected Apple IIe computer system that can provide the desired interactive audio capability as well as to detail the design of specific strategies for the CAI segments to be developed.

Introduction

Background

Inadequate student performance in military technical training is a continuing problem for all branches of the service, despite the many recent improvements that have been made in technical training curricula and training methods. Such submaximal performance inevitably results in increased training costs because of increased training time and delays in student progress through the training pipeline. One factor that has been found to contribute to students' poor academic performance is skill deficiencies of an attitudinal or motivational nature (McCombs, 1982; McCombs & Dobrovolny, 1980, 1982). These skill deficiencies can be characterized as consisting of negative orientations toward learning as well as inadequate self-management and self-control skills which are required if students are to take responsibility for their own learning process. A skill training program for remedying these deficiencies, the Motivational Skills Training Program, was developed by McCombs and Dobrovolny (1982) and has been implemented with Air Force trainees in the Precision Measuring Equipment course at Lowry Air Force Base. Evaluation findings indicated that trainees liked the program and found it helpful in both their course-work and personal lives, and trainees participating in the program had significantly higher block test scores and lower block test failure rates than control group trainees. These findings were thus seen as suggestive of the possible impact of this type of motivational skills training on trainee performance and attrition in technical training.

The existing Motivational Skills Training Program includes seven self-instructional, printed modules which were originally implemented in an instructor-led, small group format that provided trainees with the opportunity to practice

new strategies and skills, share experiences, and develop feelings of rapport with their instructors and fellow trainees. Given this implementation format, it was not possible to determine if part of the success of the program--in addition to the instructional materials themselves—was due to the group experiences or to the presence of trained instructors who facilitated trainee acquisition and maintenance of strategies and skills. The present research was, therefore, undertaken by the Army Research Institute to address these issues and explore whether the cost effectiveness of the program could be enhanced by reducing instructor and/or group interaction requirements through the use of computer-assisted instruction (CAI) for selected portions of the training.

Nature of this Research

To address the questions of (1) the contribution of instructor augumentation and group experiences to the effectiveness of the Motivational Skills Training Program and (2) the design of CAI enhancements that could reduce instructor and group process requirements for selected portions of the program, a two phase research project was undertaken. The goals of Phase I were to determine the separate contribution of instructor augmentation and group experiences to program effectiveness and to identify specific motivational skills training components which could be enhanced by the use of a CAI format. The goals of Phase II were to design and evaluate the effectiveness of CAI enhanced versions of the program and to make recommendations for future implementations of the Motivational Skills Training Program within Army technical training. This report describes the results of Phase I activities.

Relevant Literature

In order to better identify components of the motivational skills training for CAI enhancements, literature relevant to the role of instructors and group

process in this type of self-development training was selectively reviewed. Particular focus was given to research in the area of self-development programs because they generally have the goal of helping students understand themselves and develop the strategies and skills necessary to exercise personal self-control in learning and personal situations. By their nature, these self-development and motivational skills training programs involve, at least to some degree, changing both attitudes and behaviors.

With respect to the instructor's role in such training, Catterall and Gazda (1978) point out that a critical initial role of the teacher in self-development programs is to establish or build a good relationship with the student, to respond to the student with empathy, warmth and respect, and to generally provide positive human qualities that can inrease the student's ability for self-exploration and self-change. Additional components which Catterall and Gazda think teachers add to such programs are (a) to serve as a model of personal responsibility, (b) to establish a positive classroom or group climate, (c) to help students understand what is expected of them, (d) to foster self-control and independent problem solving, and (e) to reinforce success experiences through positive personal interactions with students. Similarly, Roueche and Snow (1978) argue that instructors are a necessary augmentation to individualized methods of developmental training in that they can assist the students to accept themselves and develop positive attitudes about themselves. They further argue that sophisticated instructional "gadgetry" can hinder the teaching-learning process in such training programs when used without skillful human resources, particularly in programs dealing with high-risk students who have had histories of academic failures. Brophy (1982) makes the additional point that even when students begin

to assume responsibility for their own learning, the teacher remains important as an external guide to learning and model of self-management skills.

Additional enhancements provided by trained instructors in the implementation of the McCombs and Dobrovolny (1982) Motivational Skills Training Program were (a) to make the training content more personally relevant and meaningful by relating personal military experiences, (b) to reduce students' feelings of insecurity, fear, or anxiety toward military instructors by displaying genuine personal interest in the students, and (c) to reinforce the value of the skill training for positive self-development by explaining its application and benefits in military experiences. As Stanford and Roark (1974) have pointed out, the instructor is seen as a participant in the learning process, with the same basic goals as the student. By being a participant, the instructor lowers the barrier between teacher and student and increases the probability of cooperative effort. Furthermore, in group learning situations where students have primary responsibility for their own learning through individual study, essential instructor roles include listening to students, providing feedback to clear up misunderstandings, allowing opportunities for peer teaching, supporting students, defining and structuring group tasks, and building group cohesiveness (Finkel & Monk, 1983; Michaelson, 1983).

Not only does the instructor play a key role in one-on-one student/instructor interactions during self-development or motivational skill training, but he or she can also provide a critical element to the fostering of a positive learning climate and a feeling of group. For the late adolescent/young adult, this feeling of group and the opportunity to be closely associated with his or her peer group has been cited as a strong developmental need (Erikson, 1968;

McDill & Coleman, 1965; Sears & Feldman, 1973). For this reason, a number of psychologists and educators have argued that group experiences be part of self-development programs for students at this stage of development (e.g., Catterall & Gazda, 1978; Philip & Dunphy, 1959; Schmuck, 1966, 1971; Schmuck & Schmuck, 1975; Tuckman, 1965; Watson, 1969), and that performance in academic curricula can be strengthened through group experiences (McKeachie, 1963; Minuchin, 1965; Schmuck, 1971; Schmuck & Schmuck, 1975; Webb, 1982; Webb & Cullian, 1981). The instructor's role in this type of group, according to Stanford and Roark (1974), is to ensure that activities are at least attempting to meet the life-cycle needs of students, to serve as a model, to provide structure and organization, and to establish the safety for self-disclosure and sharing.

In extending the instructor's role to that of facilitator of group interactions, the position has been taken by Stanford and Roark (1974) that human interaction is the single most important ingredient in education. Their position is based upon three principles: education is a social process; significant learning occurs through interaction; and education must include self-knowledge and self-understanding. More specifically, Rose (1977) spells out those components in groups dealing with self-management training that facilitate skill acquisition and skill maintenance. These include modeling, coaching, rehearsal, group feedback, the buddy system, behavioral assignments, and contracts.

Bouton and Garth (1983) have argued that effective learning groups are those in which (a) peer interactions promote active learning processes through student conversations and (b) structured tasks allow instructors to demonstrate their expertise while guiding students in their exploration and discovery of new knowledge. They go on to state that such groups promote learning by enhancing cognitive skills such as problem solving and reasoning, by developing interpersonal

skills such as leadership and communication, by nurturing learning-to-learn skills, and by meeting social needs for friendship and sharing. Groups thus foster active involvement both in the construction of knowledge and in the opportunity to engage in dialogue essential to learning. As Bouton and Garth (1983, p. 77) state, "An optimum context for learning provides learners with frequent opportunities to create thoughts, to share thoughts with others, and to hear others' reactions." They further argue that practice and feedback in groups is essential to acquiring skills and abilities, and state (pp. 79-80), "Group interaction is a process of questioning, discovery, assertion, and critique. It exercises all the critical faculties and problem solving skills and the process produces knowledge that the student is prepared to use."

If learning groups are permanent and heterogeneous, Michaelson (1983) argues that they can become cohesive enough to provide major sources of motivation and social support, as well as provide a variety of student viewpoints and approaches that are useful in the development of problem solving skills. Benefits which Michaelson (1983) attributes to such groups are the expansion of student experiences and appreciation for other viewpoints, development of experience of working in groups which can lead to better adaptation to later situations where teamwork or group problem solving is important, promotion of active involvement in the learning process, fostering of friendships and social support, and the development of interpersonal and group skills.

Schmuck and Schmuck (1975) discuss the importance of instructors in establishing a positive group climate and the development of group process, as well as the role group process can play in learning. In addition to enhancing the development of relationships that meet student needs for warmth and security,

interactions within groups can aid students in the learning of new concepts and skills. The research of Webb (1982; Webb & Cullian, 1981) also indicates that group process is a strong predictor of achievement, primarily because of the interaction that takes place in groups, i.e., group helping, giving help, receiving help. Ames (1981) and Neale (1983) suggest that the facilitative effects of group process are in large part dependent on whether their structure is cooperative and can positively affect self and interpersonal evaluations. Within this cooperative structure, the group process components which Catterall and Gazda (1978) list as facilitative of learning include promoting feelings of inclusion and membership, providing opportunities for shared decision making and friendships, helping students reinforce each other in the pursuit of learning goals, and providing opportunities to maintain a supportive group after the training is over.

In summary, this selective review of enhancements to skill training that could be attributed to the use of trained instructors and group process indicates that these enhancements are both affective and cognitive. On the affective side, these enhancements include increasing students' trust toward their instructor, self-worth and self-regard, motivation to use new skills, and inclusion and membership in their peer group. On the cognitive side, these enhancements include opportunities to observe personally relevant models, receive reinforcement from both instructors and peers, and rehearse new strategies and skills in interpersonal situations. Ways in which the instructor and group process were incorporated in the overall design of the Motivational Skills Training Program are described in the following section, along with a description of the content and strategies in the program.

Motivational Skills Training Program

The content and structure of the motivational program was defined as a result of an in-depth experimental analysis of specific conative (will to learn), affective, and cognitive skill deficiencies of Air Force trainees in four technical training courses at Lowry Air Force Base (McCombs & Dobrovolny, 1980). This analysis indicated that the primary deficiencies (i.e., characteristics that differentiated effective from ineffective learners) in the conative domain were that poorer students consistently had low motivation to learn, had few military or personal goals, and could be classified as being low in maturity, with little self-discipline, or the ability to take responsibility for their own learning. In the affective domain, poorer students were generally those with high levels of anxiety toward learning and taking tests, and who lacked effective skills for taking personal control and coping with the demands of technical training. In the cognitive domain, the poorer students were generally those with poor reasoning and comprehension skills, and/or those who lacked effective decision making and problem solving skills in technical or personal areas.

Based on this analysis which integrated relevant literature, student performance data, student and instructor interview results, and individual difference data, seven skill training modules w re defined (McCombs, 1982a, 1982b).

> The Introduction Module introduces students to the concepts of personal responsibility and positive self-control, the role of these concepts in generating positive feelings of competency, presents rudimentary techniques for controlling negative attitudes (e.g., use of positive self-talk and imagination), and explains the purpose of the skills training package.
>
> The Values Clarification or Self-Knowledge Module explains the role of values and beliefs in helping us define ourselves and what's important to us, stresses each person's responsibility in defining his or her own value system, and

helps students explore and resolve conflicts in their values and beliefs in a number of areas.

The Career Development Module builds on students' newly acquired self-knowledge and helps them acquire the necessary decision making skills to explore their career interests and make some career goals and plans.

The Goal Setting Module formalizes the previously learned goal setting process by first describing the purpose of goals as directing and motivating human behavior, describing a general model for systematically thinking about and setting personal goals, and helping students work through exercises for setting specific long-term and short-term goals.

The Stress Management Module describes the role of perceptions, negative self-talk, and mistaken beliefs in producing stress and presents a number of generalizeable strategies for managing stress.

The Effective Communication Module describes techniques and strategies for identifying personal communication styles, effectively communicating feelings, wants, and needs, and for dealing with stressful interpersonal situations that may impede goal attainment.

Finally, the Problem Solving Module provides a summary of the skill training package by pointing out that students have been using a problem solving approach throughout the training and by providing a general model for systematically working through and solving problems.

The choice of format for the motivational skills training materials was based on both practical and theoretical considerations. From the practical standpoint, there was a need for the format to be compatible with the requirements of a self-paced technical training environment in which students have primary responsibility for their own learning, proceeding through modularized instructional materials at their individual paces with limited instructor and group interactions. This set of considerations led to the choice of a printed, self-instructional format, incorporating an easy to read, low density style conducive to students' reading the materials on their own or in small groups prior

conducive to students' reading the materials on their own or in small groups prior to beginning their self-paced technical training course. To enhance students' self-directed learning and understanding of the concepts and strategies in the materials, visuals were included wherever appropriate, as well as periodic embedded questions and practice exercises.

From the theoretical standpoint, format issues of particular importance concerned identifying effective methods and approaches for facilitating students' skills maintenance and generalization following initial training. A review of cognitive behavior modification approaches to skill maintenance indicated that techniques which have been successfully used include various combinations of self-monitoring/self-assessment with self-reinforcement (McCombs, 1983). The techniques used in self-monitoring include personal diaries, journals, logs, note cards, graphs, progress charts, and other record keeping procedures that require individuals to frequently evaluate and record positive and negative instances of skills and behaviors in question. Self-reinforcement techniques include engaging in positive self-talk when desired outcomes are attained, recording self-ratings on the effectiveness of new skills, and identifying and applying extrinsic rewards when certain skills and behaviors have been successfully implemented.

In addition to the preceding techniques for skill maintenance, our own research has indicated that the instructor can play a critical role in skill acquisition, maintenance, and generalization (Dobrovolny, 1982; McCombs, 1982; McCombs & Dobrovolny, 1980). We found that training instructors in the role of learning strategies expert/learning facilitator and using them to augment the self-instructional format, further enhanced the effectiveness of this training in other important ways. First, the instructors were able to make the training content

more personally relevant and meaningful by relating personal experiences. Second, by displaying genuine personal interest in the students, instructors were able to reduce students' feelings of insecurity, fear, or anxiety toward interactions with higher ranking instructor personnel. Finally, instructors were able to reinforce the value of the skill training for positive self-development by explaining its application and benefits in military situations and experiences, as well as by providing a positive role model.

Through the use of a blend of cognitive and behavioral approaches, the modules are designed to be used in a self-paced mode, so that from the beginning students become responsible for their own learning. Through this extensive behavioral rehearsal, they practice and increase their own self-management skills. Further, throughout the modules, students are asked to commit themselves to a low, moderate, or high level of effort, underscoring in yet another way that they must accept responsibility for the progress in the training program. Likewise, since the role of the instructor is primarily that of model and motivator, he or she cannot be blamed for lack of student progress, nor take credit when students do well. The exercises within each module are practical, graded in difficulty, and fun to do, so that students will learn because they are active in the learning process. Finally, group discussions at the end of each module promote peer modeling and peer pressure to change. Students are encouraged by each other to practice their new skills. In these three ways--behavioral rehearsal, personal commitment, and modeling--the method of instruction matches the content being taught.

Phase I Evaluation Study Method

Research Questions

The primary questions being addressed in this Phase I evaluation study were: (1) What are the independent contributions of instructor augmentation and group experiences to the effectiveness of the Motivational Skills Training Program and (2) What CAI enhancements are suggested for those skill training components identified as benefitting from instructor augmentation and group experiences?

It was originally intended that answers to the preceding questions be derived from data collected in an experimental study which explored the relative effectiveness of the printed modules under conditions of varying instructor and group augmentation. A number of difficulties with data collection, however, necessitated that the selection and design of CAI enhancements be based on a contractor analysis of the Motivational Skills Training Program. The following sections, therefore, separately describe procedures used in the experimental study and in the contractor analysis. Results of these two sets of procedures are presented in the next major section of this report, followed by a discussion of their implications for the design of CAI enhancements.

Phase I Experimental Study

Experimental design. The experimental design for this study consisted of four conditions: a printed modules only (MO) condition, a modules plus instructor introductions (MI) condition, a modules plus instructor introductions and group discussions (MID) condition, and a no training control (C) condition. Originally defined independent variables of interest were students' scores on the General,

Mechanical, and Eletrical subscales of the Armed Services Vocational Aptitude Battery (ASVAB); educational level; initial judgments of self-efficacy; and initial indices of anxiety and ability to cope with stress. Originally defined dependent variables of interest were a variety of individual difference and performance measures collected after students were in their technical training course (i.e., subsequent indices of anxiety and ability to cope with stress, instructor ratings of students' self-management skills, block test scores, test failure rates, and eliminations).

Measures. To assess student judgments of self-efficacy, a 20-item self-report measure titled How I Feel About Myself was developed. Students respond to each item by circling one of six responses: Not At All Like Me, Quite Unlike Me, Slightly Unlike Me, Slightly Like Me, Quite Like Me, Very Much Like Me. Items in this measure are based on Bandura's (1982) definition of self-efficacy and assessed students' judgments of their capabilities for self-management and coping, their feelings of competency, their perceptions of their ability to plan, expend effort and persevere, and engage in self-control and self-regulation.

To assess students' anxiety and ability to cope with stress, eight of the nine scales of the Personal Stress Profile published by Girdana and Everly (1979) were used. The eight scales assess adaptation, frustration, overload, deprivation, nutrition, self-perception, Type A behavior, and anxiety via a self-report, self-scoring format that gives students the opportunity to chart their own stress profile and determine if their scores indicated low, medium, or high vulnerability to stress. Response formats on the eight scales vary from checking relevant items to scalar alternatives of almost always true, often true, seldom true, and almost never true.

An Instructor Questionnaire was developed to assess instructor ratings of students' self-management skills. The questionnaire consists of 26 items that describe a variety of student behaviors for which instructors are asked to indicate how descriptive each item is of each student. Reponses range from not at all, somewhat, moderately so, to very much so. (Copies of the self-efficacy, stress, and instructor measures are included in Appendix A of this report.)

Student ASVAB scores, educational level, block test scores, test failure rates, and eliminations were obtained from individual student records maintained by personnel in the Weapons and Armament School at Lowry Air Force Base.

Subjects. Participants in the Phase I evaluation study were male and female students scheduled to begin the Weapons and Armament School at Lowry Air Force Base during the period of 21 January through 1 July 1983. Students were assigned to one of the four experimental conditions by designated student squadron personnel following student arrival on base. Assignment to conditions was based on the number of days students were on base prior to course entry. Students with less than three days available were assigned to the control condition. Students with three days available were assigned to the MO condition, students with four days available were assiged to the MI condition, and students with five or more days available were assigned to the MID condition. Although it was originally planned to collect data on at least 50 students per condition, reductions in the number of students entering that Weapons and Armament School during the period of the study and problems in scheduling students for the skill training necessitated both a longer time period for the study and a reduction in the number of students able to participate. When the study was concluded on 1 July 1983, data were available on 28 students in the MO condition, 17 students

in the MI condition, 23 students in the MID condition, and 52 students in the control condition. The number of students available for data analysis varied due to missing data on some of the independent and dependent variables of interest.

Procedures. A 10-hour instructor training program was designed to familiarize instructors with concepts and skills presented in the Motivational Skills Training Program, as well as to provide guidelines for introducing each module and conducting small group discussions/practice sessions at the end of each module. In addition, the training included specific procedures instructors were to follow in each experimental condition. A workshop format was used for this training, wherein contractor personnel guided instructor participants through a training outline and provided models of the instructors' role in introducing the modules and leading group discussions/practice sessions. Instructors were also given opportunities to generate their own examples to be included in the introductions and their own practice exercises, thereby arriving at personalized plans for conducting the skill training. (A copy of the instructor training outline is included in Appendix B.)

It was originally arranged with the Head of Student Squadrons at Lowry Air Force Base to train Student Training Advisors (STAs) in the role of instructor for the evaluation study and to have the STAs conduct the training per a designated schedule with students in the squadrons prior to their entering the Weapons and Armament School. Five STAs began the training on 13 December 1982, but after two days of training it was determined that the STAs would not be able to conduct the student training for the duration of the study due to other time commitments. They did, however, agree to coordinate the scheduling of students to experimental conditions, to administer pretest measures to control

students, and to ensure that experimental students reported to their designated classrooms for the training.

The unavailability of STAs for student training necessitated the use of University of Denver graduate research assistants and contractor staff as instructors for the training. Four contractor staff personnel and two graduate research assistants from the clinical psychology program were trained in the role of instructor the week of 10 January 1983. The two graduate research assistants were given primary responsibility for the student skill training, with contractor personnel serving as backups when scheduling conflicts arose.

The self-efficacy and stress profile pretest measures were administered to control condition students by STAs in the squadron prior to their entry into the Weapons and Armament School. These pretest measures were administered to experimental group students at the beginning of their skill training by the graduate research assistants. Training in the three experimental conditions was conducted in a designated classroom at Lowry Air Force Base. Experimental conditions and the number of students participating in a given condition varied from week to week depending on (a) the number of days entering students had available prior to beginning their technical training course and (b) whether they could be released from squadron duties. In general, however, at least three to seven students comprised any one experimental condition during a given week.

In the Modules Only condition, students were instructed that they were to read each of the modules on their own, complete the practice exercises, and use their instructors to clarify confusing points or answer questions. In the Modules plus Instructor Introductions condition, students were given an introduction to the important concepts and skills in each module, and were told to

read through the modules on their own and complete the practice exercises. In the *Modules plus Instructor Introductions and Group Discussions condition*, students were given an introduction to the important concepts and skills in each module, were told to read through the modules on their own and complete the practice exercises, and were asked to participate in group discussions/practice sessions at the end of each module. Because student reading times varied in each condition, students who finished were told to reread sections of the module they were working on so that introductions and group sessions could be conducted when all students had finished reading each module. At the end of the training in each of the experimental conditions, students were reminded to refer to their modules as needed during their technical training and to actively use the strategies and skills they had learned to solve problems that might arise in both their technical training and personal lives.

Once students entered the Weapons and Armament School, procedures were coordinated with school personnel to administer the post stress profile and to fill out the instructor questionnaires for all students finishing the second block of the course (approximately 4 weeks after the beginning of the course). Despite frequent monitoring, however, it was learned that for sizeable numbers of control and experimental students, the post-stress profile was not administered and instructor questionnaire was not filled out, necessitating the deletion of these measures from the data analysis. Course performance data were collected on the first two blocks of the course for all students and on the first six blocks of the course (approximately 12 weeks after the beginning of the course) for as many students as feasible within the evaluation time period.

In summary, then, the following problems with data collection necessitated the use of a contractor analysis for the identification of motivational

skills training components likely to be enhanced through CAI presentation/simulation of selected instructor and group functions. First, the change in plans regarding the use of STAs (i.e., their subsequent unavailability) for conducting the motivational training led to costly delays in the initiation of the study and the necessity to train contractor staff for this purpose. Second, the cooperation of student squadron personnel in identifying and scheduling students for training was less than ideal, leading to fewer numbers of students participating in the study than originally planned. Third, incomplete and missing data on subsequent student measures collected in the technical training school environment seriously reduced the amount of information available on which to make the CAI selection decisions. Finally, the drop in number of students participating necessitated extending the time period for the study for several months past the time when the identification of CAI segments was scheduled to begin, resulting in the need for an alternative procedure.

Phase I Contractor Analysis

Data source. Contractor personnel who contributed to the conceptual analysis of the Motivational Skills Training Program and the identification of program components (i.e., instructor and group functions) that would lend themselves to a CAI format included the principal investigator, the project consultant, a CAI design specialist, and the two graduate research assistants who served as trainers in the evaluation study. These personnel participated in the conceptual analysis in May through June 1983.

Analysis procedures. The goals of the conceptual analysis were to (a) identify general roles and functions of the instructor and group experiences in facilitating student acquisition of concepts and skills in the motivational training

program; (b) select those roles and functions which lent themselves to a CAI format or which could be easily simulated in this format; and (c) extend the general roles and functions identified into specific design guidelines for each of the seven modules in the motivational program.

In accomplishing these goals, the following procedures were used:

1. The two graduate research assistants responsible for the conduct of training during the experimental study separately participated in group discussions with contractor staff during which they were asked to (a) generally discuss what they thought were their most important functions in introducing the program and each module (i.e., what concepts and methods of presentation seemed to work best); (b) generally describe what they thought were their most important roles in facilitating group discussions as well as the roles and functions most facilitative in the group interchange; and (c) specifically identify instructor and group roles and functions that were most successful for each individual module.

2. Results of the preceding interviews were synthesized and areas of agreement identified. Contractor staff participated in a group process during this synthesis, using such techniques as brainstorming to expand upon and refine interview results.

3. Design guidelines for CAI introductions and practice segments were produced, including general descriptions of content and strategies to be used and estimates of lengths for each of the CAI segments. Relevant research was consulted in the production of specific guidelines.

Phase I Evaluation Results

Phase I Experimental Study

Following the completion of Phase I data collection, the following measures were available for analysis: (1) pretreatment student differences by condition in ASVAB scores (General, Mechanical, Electrical), education level, self-efficacy scores, and stress profile scores on the eight subscales; and (2) posttreatment student differences by condition in block test scores for Blocks 1 through 6, percentage of students eliminated from the Weapons and Armament course, and percentage of students who had failed and been retested at the end of Blocks 2 and 6 of the Weapons and Armament course.

Data analysis procedures. Individual student data on the independent and dependent variables of interest were input into the University of Denver's VAX 780 system for analysis by selected programs from the Statistical Package for the Social Sciences (SPSS-X version; Nie et al., 1983). Actual student scores were input for the ASVAB, self-efficacy, stress profile, and block test measures and special values were assigned to indicate missing data. For education level, the value "1" was used to indicate no GED or high school diploma; "2" was used to indicated GED; "3" was used to indicate high school diploma; "4" was used to indicate some post high school education; and "5" was used to indicate two or more years of college. Elimination data was coded such that "1" indicated "not eliminated" and "2" indicated "eliminated." Retest data was simply coded from 0 to n to indicate number of retests in each block. A significance level of $p < .05$ was set for all comparisons.

The CONDESCRIPTIVE program of SPSS was calculated on all variables by condition in order to obtain descriptive statistics (e.g., means, standard

deviations, ranges, etc.). The BREAKDOWN PROGRAM OF SPSS was calculated to obtain one-way analysis of variance results between conditions for all independent and dependent variables except eliminations and retests. For these latter variables, simple percentages were calculated.

Pretreatment results. Means and standard deviations for all pretreatment measures are presented by experimental condition in Tables 1a and 1b. One-way analysis of variance results for these data indicated no significant differences between conditions for any of the pretreatment measures. Students were, therefore, considered not to differ in these variables of interest prior to experimental manipulations.

Posttreatment results. Means and standard deviations for block test scores, Blocks 1 through 6, are presented by experimental condition in Table 2. Separate one-way analyses of variance on each block test score indicated no significant differences between conditions.

Percentages of students eliminated from the Weapons and Armament course and percentage of students retesting at the ends of Blocks 2 and 6 are presented in Table 3. Examination of these data indicates that (1) although 10 and 11.5 percent of the students were eliminated from the control and modules only conditions, respectively, no students were eliminated from the modules plus instructor and modules plus instructor and groups conditions; (2) fewer students had failed and been retested at the end of Block 2 in the modules only and modules plus instructor conditions than in the control and modules plus instructor and groups condition; and (3) more control condition students had failed and been retested at the end of Block 6 than experimental students, with the fewest number of students failing in the modules plus instructor and groups condition.

Table 1

Group Differences in Pretreatment Student Characteristic Measures

Conditions	ASVAB Scores									Education Level			Pre Self-Efficacy		
	General			Mechanical			Electrical								
	$\bar{X}$	SD	n	$\bar{X}$	SD	n	$\bar{X}$	SD	n	$\bar{X}$	SD	n	$\bar{X}$	SD	n
Control	55.1	15.8	51	51.3	19.9	51	54.1	19.3	51	3.1	.38	49	96.7	11.0	52
Modules Only	59.4	21.4	26	59.6	19.2	26	62.3	21.8	26	3.1	.54	24	93.5	11.7	28
Modules Plus Instructor	62.9	19.0	17	62.1	22.3	17	65.5	16.3	17	3.1	.24	17	92.1	12.4	17
Modules Plus Instructor and Group	53.2	17.4	22	57.7	15.9	22	56.6	15.8	22	3.0	.00	21	90.9	23.1	23

Conditions	Pre Stress																				
	Scale 1			Scale 2			Scale 3			Scale 4			Scale 5			Scale 6			Scale 7			Scale 8		
	$\bar{X}$	SD	n	$\bar{X}$	SD	n	$\bar{X}$	SD	n	$\bar{X}$	SD	n	$\bar{X}$	SD	n	$\bar{X}$	SD	n	$\bar{X}$	SD	n	$\bar{X}$	SD	n
Control	176.8	88.2	52	22.5	4.0	52	20.0	3.7	52	22.6	4.1	52	14.4	3.0	52	17.6	4.3	52	22.6	4.5	52	20.2	5.8	52
Modules Only	205.5	65.7	28	22.2	2.8	28	29.3	3.0	28	23.0	4.7	27	14.7	2.3	27	18.3	3.3	27	21.7	4.0	26	21.1	4.3	26
Modules Plus Instructor	165.6	44.6	17	21.7	5.4	17	19.7	3.6	17	22.4	4.3	17	17.1	10.3	16	19.4	4.7	16	21.4	4.5	16	20.2	4.1	16
Modules Plus Instructor and Group	205.5	71.7	23	23.6	3.9	23	20.7	4.6	23	23.8	4.0	23	15.3	2.1	22	20.3	4.6	22	22.4	3.5	22	22.1	5.9	21

Table 2

Group Differences in Posttreatment Performance Measures

Conditions	Block Test Scores																	
	Block 1			Block 2			Block 3			Block 4			Block 5			Block 6		
	$\bar{X}$	SD	n	$\bar{X}$	SD	n	$\bar{X}$	SD	n	$\bar{X}$	SD	n	$\bar{X}$	SD	n	$\bar{X}$	SD	n
Control	79.6	12.9	51	79.6	12.7	50	83.1	7.7	46	87.4	10.6	45	86.4	10.8	45	90.8	6.4	45
Modules Only	81.8	12.5	26	81.8	14.4	26	85.9	4.8	15	92.7	8.2	15	91.7	8.9	15	90.7	4.2	15
Modules Plus Instructor	82.5	10.0	17	80.8	8.3	17	85.1	9.4	15	89.6	11.4	15	86.5	8.2	15	85.6	6.4	15
Modules Plus Instructor and Group	76.6	12.1	22	80.5	10.5	21	82.3	12.2	21	91.0	8.2	20	89.3	8.4	20	90.1	8.4	20

Table 3

Percentage of Students Eliminated and Retested by Condition

Condition	Eliminations	Retests	
		Block 2	Block 6
Control	5/50 = 10.0%	15/49 = 30.6%	14/46 = 30.4%
Modules Only	3/26 = 11.5%	5/25 = 20.0%	1/15 = 6.7%
Modules Plus Instructor	0/17 = 0.0%	2/17 = 11.8%	3/15 = 20.0%
Modules Plus Instructor and Groups	0/21 = 0.0%	8/21 = 38.1%	0/20 = 0.0%

Thus, there appears to be some benefit in terms of instructor and group augmentation with regard to course eliminations and test failures.

Phase I Contractor Analysis

The results of the contractor analysis included (a) the identification of general roles and functions of the instructor and group experiences in facilitating student acquisition of concepts and skills in the motivational skills program and (b) the selection of those roles and functions that lent themselves to a CAI format or could be easily simulated in this format. In addition, this analysis resulted in the development of specific design guidelines for each of the seven modules in the motivational skills program. The following sections describe these results.

General Roles and Functions of the Instructor and Group Experiences

The synthesis and expansion of trainer interview results led to the definition of general instructor roles and functions both in introducing the skill training program and individual modules and in leading group discussions and practice sessions at the end of each module. Three primary instructor roles were identified: Modeler, motivator, and facilitator. Instructor functions within these roles were defined as follows.

Modeler — In the modeler role, the instructor explains and demonstrates the application of new concepts, skills, and strategies. In the introduction segments, this role is enacted by the instructor presenting case study examples of how new concepts, skills, and strategies can be applied in particular problem areas. In the practice segments, this role is enacted by demonstrations of particular skills and strategies in specific problem situations. As a modeler, the instructor presents him or herself as a friend, as someone who understands students' problems and cares, and who models how the application of new concepts and skills can enhance feelings of self-worth and self-efficacy.

Motivator — In the motivator role, the instructor coaches and encourages students to apply the new concepts, skills, and strategies in difficult situations. In the introduction segments, instructors emphasize what students will get out of the skill training program in general and each module in particular; they discuss the particular tools that students will acquire in each skill training area. In the practice segments, instructors establish a positive group climate, encourage student sharing of experiences, summarize how new skills and strategies are useful in solving problems, reinforce student performance, and generally act as a positive coach in keeping students "fired up" and applying positive self-control strategies.

Facilitator — In the facilitator role, instructors are helpers in the sense of being guides in both the acquisition and practice of new concepts, skills, and strategies. In the introduction segments, this role takes the form of breaking down new concepts, skills, and strategies into easily understandable and personally relevant and meaningful pieces; the instructor provides advance organizers and emphasizes how these new concepts and skills relate to student experiences. In the practice segments, this role takes the form of interactively guiding students through specific practice exercises, encouraging participation, and helping students apply and rehearse new skills in a variety of situations.

General group roles and functions were also defined as a result of synthesizing and expanding the results of trainer interviews. Functionally, it was identified that the group experiences encourage identification and sharing with others, appreciation of others' viewpoints, and the development of problem solving skills. Through the sharing of experiences, students gain the knowlege that others have problems similar to their own, and they receive encouragement as friends to work on problems together. Group experiences also provide opportunities for peer teaching (e.g., assisting each other in behavioral assignments and contracts) and reinforcement, and contribute to the development of teamwork and a feeling of group membership.

Specific CAI Guidelines for Instructor and Group Functions

In operationalizing the selected instructor and group functions in the CAI format, it was decided that a high degree of personalization was desirable both for making the instructor and group seem more "real" and for promoting student identification with the functional roles of the instructor and group. For this reason, it was decided that a main character should be created to represent the instructor and that a cast of characters be created to represent other students with problems in the areas dealt with in the program modules.

To provide the instructor roles of modeler, motivator, and facilitator, a character named "PC" was created to serve as an instructor/guide and to interactively perform each role by demonstrating the use of new strategies and skills, providing introductory concepts in a meaningful context, and coaching students in the application of new concepts and skills via personalized feedback and encouragement. In the area of group process functions, a set of military trainee characters was created to represent specific personal responsibility/self-control problems related to each module's content area. That is, a male or female character and accompanying problem scenario was defined to exemplify typical student problems with personal responsibility in general, with knowing who they are and what's important to them, with knowing their career interests and goals, with knowing how to set goals, with knowing how to manage stress, with knowing how to communicate effectively, and with knowing how to solve problems. These characters were designed to "grow" as a result of their skill training from their initial inability to solve particular problems to competent problem solvers and self-managers. This transition was designed to occur between PC's guided CAI introductions and CAI practice sessions for each module. CAI segments were,

therefore, designed to incorporate the instructor and group process roles and functions by providing introductions to each printed module as well as practice sessions following student reading of each module.

The characterisitics defined for PC included being principled and strong, yet easy for students to identify with. Thus PC was designed to be a military person who had already been through the motivational training and was at the stage of his Army career where he was working in an operational field unit. By not being that much older than the typical Army trainee in resident training, PC could easily remember and relate to his earlier experiences.

The characteristics defined for the set of military trainees that would simulate the group in CAI differed from module to module. For Module 1, a character named Rudy was defined who was basically an irresponsible student and one who wasn't sure why he was in the Army or how he was going to adjust to this new life. For Module 2, a character named Eric was created to represent students who tend to rebel against authority and have a hard time understanding rules and regulations. For Module 3, a character named Larry was created who was confused about what he wanted to do with his life and hadn't thought about his long range career interests and plans. For Module 4, a character named Lucy was defined to represent students who have let themselves drift though life with no defined long range goals and plans. For Module 5, a character named David was created to typify students who let worry and anxiety interfere with their performance and interpersonal relationships. For Module 6, two characters were defined, Chris (female) and Scott (male), to represent students who had difficulties communicating effectively with their peers and authority figures because of being too aggressive and too nonassertive, respectively. Finally, for Module 7, all prior characters were reintroduced to exemplify how each of their problems could be solved by a systematic problem solving approach.

In addition to defining the characters and their functional roles, case studies were defined and, at this stage of the CAI design process, general level outlines of what each introduction and practice section would cover were laid out. It was decided that the eight introductory segments would be approximately 10 minutes each, and that the seven practice segments would be about 15 minutes each, for a total of about 2½ hours of CAI.

Discussion and Conclusions

Summary of Evaluation Findings

The Phase I experimental study was designed to explore the independent contribution of instructor and group experiences to the effectiveness of the Motivational Skills Training Program, and thereby gain insight into the most important instructor and group functions and how these might be simulated in a CAI format. Although difficulties with data collection precluded the use of experimental findings in the selection of components for CAI, the study did result in some implications regarding the importance of the instructor and group experiences for this type of skill training. The primary findings in this study were that students in the control group did not differ from students in the experimental groups (Modules Only, Modules plus Instructor Introductions, Modules plus Instructor Introductions and Group Practice) in scores they received on end-of-block tests for the first six blocks of the *Weapons and Armament* course. However, the number of students eliminated from the course was highest for the control and Modules Only conditions, with no students eliminated in the remaining two experimental conditions that were supported by instructor introductions and group experiences. In addition, the test failure rates by the end of Block 6 were lowest for students in the condition with both instructor introductions and group practices. These latter findings, then, suggest that instructor and group experiences enhance the subsequent effectiveness of the Motivational Skills Training Program, with implications for student performance and attrition in technical training--findings which replicate those found earlier by McCombs and Dobrovolny (1982).

Difficulties with data collection in the experimental study necessitated the use of an alternative approach to identifying the roles and functions of the

instructor and group experiences in facilitating student acquisition of concepts and skills in the Motivational Skills Training Program. A contractor analysis of these roles and functions was thus undertaken which indicated that the instructor was instrumental in establishing a good relationship or personal rapport with the student, in serving as a model of personal responsibility and positive self-control, in helping students understand what is expected of them in the training program, in introducing important concepts in each module in order to provide an advance organizer or meaningful structure for acquiring new concepts and skills, and in reinforcing the value of the skill training for positive self-development by explaining its application and benefits in military experiences. These functions were divided into three primary instructor roles that could be provided by the computer: modeler, motivator, and facilitator. A character named "PC" was defined to personalize and enact these roles.

Contractor analysis of the roles and functions of the group experiences in enhancing program effectiveness indicated that facilitative functions included helping students identify with peers and open up to sharing personal feelings and experiences, providing opportunities for shared problem solving and friendships, helping students reinforce mastery of new skills by group rehearsal and feedback, and assisting students in behavioral assignments and contracts that promote skill maintenance after the training is over. A set of military characters was defined to personalize these group functions and represent specific personal responsibility/self-control problems related to each module's content area. The general CAI design guidelines, then, specified the use of PC and the set of characters in CAI introductions to the program and each module, and in CAI practice sessions at the end of each module.

The end product of the Phase I evaluation study was the general definition of instructor and group functions to be incorporated into CAI introductions and practices. It was also determined that the introductory segments would be approximately 10 minutes each and the practice segments would be approximately 15 minutes each, for a total of about 2½ hours of CAI.

Implications for Detailed Design of CAI Segments

The findings from the experimental study and the contractor analysis generally point to the importance of the instructor and group functions in enhancing the effectiveness of the Motivational Skills Training Program. More specifically, the findings from the contractor analysis suggest the importance of personalization and the need for simulation of the instructor and group functions within a "rich" training medium. That is, it may not be sufficient to merely personalize the instructor and group by the creation of a graphic representation of the instructor (*i.e., by creating "PC") or various group characters.* For students to identify with and sense the human qualities of these instructor and group characters, both interactive visual and audio capabilities appear necessary if one is to maximally simulate these human components of the program.

To provide this interactive visual and auditory capability within the cost constraints and practicalities of this project, an alternative to currently available buy expensive videodisc technology needs to be sought. In addition, the need for this more elaborate technology can be questioned in a skills training program of this nature. In a motivational skills training program where the realistic detail of actual video is not required, and CAI graphics are sufficient, a simple computer-controlled audio capability was believed to be adequate for providing the personalization and human simulation of the instructor and group functions. For

these reasons, then, the goals of the second phase of this project were to locate or develop an audio interface for the selected Apple IIe computer system that would provide the desired interactive audio capability.

In addition to the selection of an interactive audio/CAI format for the CAI introductory and practice segments, the results of the Phase I activities also have implications for the incorporation of a number of other strategies into the detailed design. These include the development of realistic case study scenarios for the group characters that will allow students to see the growth in self-management and self-control skills between introduction and practice segments, the inclusion of practice exercises that provide students with the opportunity to generate their own solutions to specific problems and receive feedback as to their adequacy, the specification of how audio can best be used in conjunction with CAI presentations to both motivate students and help them expand their existing and developing skills, and the use of special highlighting and cuing strategies that can enhance the teaching/learning process. The definition and detailed specification of these and other strategies for the CAI segments will be part of the Phase II report for this project.

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APPENDIX A

Measures in Phase I Experimental Study

Combs (1982)

HOW I FEEL ABOUT MYSELF

Directions: Below are a list of statements which may or may not describe how you feel about yourself. Indicate how much like you each statement is by circling one number for each statement.

NAME_____ DATE_____

		Not at all like me	Quite unlike me	Slightly unlike me	Slightly like me	Quite like me	Very much like me
1.	I am able to do things as well as most other people.	1	2	3	4	5	6
2.	I can do just about anything I set my mind to do.	1	2	3	4	5	6
3.	I take a positive attitude toward myself.	1	2	3	4	5	6
4.	When things don't go the way I want them to, I don't give up because I know I can reach my goal eventually.	1	2	3	4	5	6
5.	I feel good about myself.	1	2	3	4	5	6
6.	When an unpleasant thought is bothering me, I either try to resolve the problem or think about something pleasant.	1	2	3	4	5	6
7.	Most of the good things that happen to me are because I tried hard and used my abilities.	1	2	3	4	5	6
8.	I do a lot of things without much planning.	1	2	3	4	5	6
9.	When I am faced with a difficult problem, I try to solve it step-by-step.	1	2	3	4	5	6
10.	I feel like I am in control of my life.	1	2	3	4	5	6
11.	When I am in a low mood, it's of little use for me to try thinking of happy thoughts.	1	2	3	4	5	6
12.	I am not confident in my ability to succeed at things I try to do.	1	2	3	4	5	6
13.	I often have trouble organizing my work so that I can get everything done.	1	2	3	4	5	6
14.	When I realize that I cannot help but be late for an important meeting, I tell myself to keep calm.	1	2	3	4	5	6
15.	Luck may have something to do with my ability to succeed, but most of my successes are due to my efforts.	1	2	3	4	5	6
16.	I find it difficult to overcome my feelings of nervousness and tension all by myself.	1	2	3	4	5	6
17.	I feel competent.	1	2	3	4	5	6
18.	I don't plan ahead very much.	1	2	3	4	5	6
19.	When I am feeling worried, there is little I can do or think to change my feelings.	1	2	3	4	5	6
20.	When I find it difficult to settle down and do a certain job, I look for ways to help me settle down.	1	2	3	4	5	6

NAME_____ DATE_____

PERSONAL STRESS PROFILE

This booklet contains eight self-scoring exercises that you can use to figure out your own stress profile. This profile will show you areas in your life where you are especially vulnerable to stress. Knowing what these areas are can help you pick areas where you want to improve your ability to manage stress. Complete each of the eight exercises and then plot your total scores for each exercise on the summary profile sheet at the end of this booklet. We would also like you to record your total scores for each of the eight exercises on a special answer sheet that is provided. Your scores are confidential and will be used for research purposes only.

Exercise 1

Below are listed events which occur in the life of a college student. Place a check in the left-hand column for each of those events that have happended to you during the last 12 months. After checking the items above, add up the point values for all of the items checked.

	Life Event	Point Values
_____	Death of a close family member	100
_____	Jail term	80
_____	Final year or first year in college	63
_____	Pregnancy (to you or caused by you)	60
_____	Severe personal illness or injury	53
_____	Marriage	50
_____	Any interpersonal problems	45
_____	Financial difficulties	40
_____	Death of a close friend	40
_____	Arguments with your roommate (more than every other day)	40
_____	Major disagreements with your family	40
_____	Major change in personal habits	30
_____	Change in living environment	30
_____	Beginning or ending a job	30
_____	Problems with your boss or professor	25
_____	Outstanding personal achievement	25
_____	Failure in some course	25
_____	Final exams	20
_____	Increased or decreased dating	20
_____	Change in working conditions	20
_____	Change in your major	20
_____	Change in your sleeping habits	18
_____	Several-day vacation	15
_____	Change in eating habits	15
_____	Family reunion	15
_____	Change in recreational activities	15
_____	Minor illness or injury	15
_____	Minor violations of the law	11

Score: _____

Exercise 2

Choose the most appropriate answer for each of the 10 statements below as it usually pertains to you. Place the letter of your response in the space to the left of the question. Then add up your score using the key at the end of this exercise.

_____ 1. When I can't do something "my way," I simply adjust to do it the easiest way.
(a) Almost always true (b) Often true
(c) Seldom true (d) Almost never true

_____ 2. I get "upset" when someone in front of me drives slowly.
(a) Almost always true (b) Often true
(c) Seldom true (d) Almost never true

_____ 3. It bothers me when my plans are dependent upon the actions of others.
(a) Almost always true (b) Often true
(c) Seldom true (d) Almost never true

_____ 4. Whenever possible, I tend to avoid large crowds.
(a) Almost always true (b) Often true
(c) Seldom true (d) Almost never true

_____ 5. I am uncomfortable having to stand in long lines.
(a) Almost always true (b) Often true
(c) Seldom true (d) Almost never true

_____ 6. Arguments upset me.
(a) Almost always true (b) Often true
(c) Seldom true (d) Almost never true

_____ 7. When my plans don't "flow smoothly," I become anxious.
(a) Almost always true (b) Often true
(c) Seldom true (d) Almost never true

_____ 8. I require a lot of room (space) to live and work in.
(a) Almost always true (b) Often true
(c) Seldom true (d) Almost never true

_____ 9. When I am busy at some task, I hate to be disturbed.
(a) Almost always true (b) Often true
(c) Seldom true (d) Almost never true

_____ 10. I believe that "all good things are worth waiting for."
(a) Almost always true (b) Often true
(c) Seldom true (d) Almost never true

Scoring Key: 1 and 10: a=1, b=2, c=3, d=4
2-9: a=4, b=3, c=2, d=1

Score: _____

Exercise 3

Choose the most appropriate answer for each of the 10 statements below and place the letter of your response in the space to the left of the question. When finished, add up your score using the key at the end of this exercise.

How often do you . . .

_____ 1. Find yourself with insufficient time to complete your work?
(a) Almost always (b) Very often
(c) Seldom (d) Never

_____ 2. Find yourself becoming confused and unable to think clearly because too many things are happening at once.
(a) Almost always (b) Very often
(c) Seldom (d) Never

_____ 3. Wish you had help to get everything done?
(a) Almost always (b) Very often
(c) Seldom (d) Never

_____ 4. Feel that people around you simply expect too much from you?
(a) Almost always (b) Very often
(c) Seldom (d) Never

_____ 5. Feel overwhelmed by the demands placed upon you?
(a) Almost always (b) Very often
(c) Seldom (d) Never

_____ 6. Find your work infringing upon your leisure hours?
(a) Almost always (b) Very often
(c) Seldom (d) Never

_____ 7. Get depressed when you consider all of the tasks that need your attention?
(a) Almost always (b) Very often
(c) Seldom (d) Never

_____ 8. See no end to the excessive demands placed upon you?
(a) Almost always (b) Very often
(c) Seldom (d) Never

_____ 9. Have to skip a meal so that you can get work completed?
(a) Almost always (b) Very often
(c) Seldom (d) Never

_____ 10. Feel that you have too much responsibility?
(a) Almost always (b) Very often
(c) Seldom (d) Never

Scoring Key: a=4, b=3, c=2, d=1 Score: _____

Exercise 4

Indicate the most appropriate response to the following 10 statements in the space provided. Then add up your score using the key at the end of this exercise.

_____ 1. I have trouble paying attention during lectures that last over 20 minutes.
(a) Almost always true (b) Often true
(c) Seldom true (d) Almost never true

_____ 2. When I know I will have to wait for someone, I usually bring something to keep me busy.
(a) Almost always true (b) Often true
(c) Seldom true (d) Almost never true

_____ 3. I dislike repetitive tasks; I would rather work on something different every time.
(a) Almost always true (b) Often true
(c) Seldom true (d) Almost never true

_____ 4. I get anxious when I don't have anything to keep me busy.
(a) Almost always true (b) Often true
(c) Seldom true (d) Almost never true

_____ 5. I relax best by keeping busy.
(a) Almost always true (b) Often true
(c) Seldom true (d) Almost never true

_____ 6. Moving away from family and friends is very undesirable for me.
(a) Almost always true (b) Often true
(c) Seldom true (d) Almost never true

_____ 7. I find it difficult to throw away old clothes, furniture, and other mementos.
(a) Almost always true (b) Often true
(c) Seldom true (d) Almost never true

_____ 8. I get homesick when I'm in a new place for even a short time.
(a) Almost always true (b) Often true
(c) Seldom true (d) Almost never true

_____ 9. I hate to be alone.
(a) Almost always true (b) Often true
(c) Seldom true (d) Almost never true

_____ 10. I make a point of belonging to some social group.
(a) Almost always true (b) Often true
(c) Seldom true (d) Almost never true

Scoring Key: a=4, b=3, c=2, d=1 Score: _____

Exercise 5

Choose the most appropriate answer for each of the statements below and place the letter of your response in the space to the left. When you've finished, add up your score using the key at the end of this exercise.

_____ 1. I usually eat pastries or other foods high in quick energy as my only lunch:
(a) 2 times/week or less (b) 3-4
(c) 5-6 (d) Every day

_____ 2. I drink _____ cola beverages (12 oz. portion) per day.
(a) 2 or less (b) 3-4
(c) 5-6 (d) 7 or more

_____ 3. I drink at least _____ cups of coffee or tea per day (excluding herbal tea).
(a) 2 or less (b) 3-4
(c) 5-6 (d) 7 or more

_____ 4. I use _____ teaspoons of refined sugar per day.
(a) 4 or less (b) 5-8
(c) 9-15 (d) 16 or more

_____ 5. I add salt to my food at meals (total shakes of a table salt shaker):
(a) 10 or less (b) 11-20
(c) 21-30 (d) 31 or more

_____ 6. I eat chocolate (average sized bar, 1 oz.):
(a) 1 bar or less/day (b) 2-3 bars/day
(c) 4-5 bars/day (d) 6 or more bars/day

_____ 7. I eat a doughnut or pastry as my only breakfast food other than a beverage?
(a) 2 times/week or less (b) 3-4
(c) 5-6 (d) Every day

_____ 8. I smoke tobacco.
(a) Never (b) Less than 1 pack/day
(c) 1-2 packs/day (d) More than 2

_____ 9. I am exposed to the sidestream of smoke of others around me:
(a) Not at all (b) Less than 1 hr./day
(c) 2-4 hrs./day (d) More

_____ 10. When I am around even minimal cigarette or cigar smoking my eyes or nose become irritated.
(a) Never true (b) Seldom true
(c) Often true (d) Always true

Scoring Key: a=1, b=2, c=3, d=4 Score: _____

Exercise 6

Choose the alternative that best summarizes how you generally behave, and place your answer in the space provided. Then add your score using the key at the end of this exercise.

_____ 1. When I face a difficult task, I try my best and will usually succeed.
(a) Almost always true (b) Often true
(c) Seldom true (d) Almost never true

_____ 2. I am at ease when around members of the opposite sex.
(a) Almost always true (b) Often true
(c) Seldom true (d) Almost never true

_____ 3. I feel that I have a lot going for me.
(a) Almost always true (b) Often true
(c) Seldom true (d) Almost never true

_____ 4. I have a very high degree of confidence in my own abilities.
(a) Almost always true (b) Often true
(c) Seldom true (d) Almost never true

_____ 5. I prefer to be in control of my own life as opposed to having someone else make decisions for me.
(a) Almost always true (b) Often true
(c) Seldom true (d) Almost never true

_____ 6. I am comfortable and at ease around my superiors.
(a) Almost always true (b) Often true
(c) Seldom true (d) Almost never true

_____ 7. I am often overly self-conscious or shy when among strangers.
(a) Almost always true (b) Often true
(c) Seldom true (d) Almost never true

_____ 8. Whenever something goes wrong, I tend to blame myself.
(a) Almost always true (b) Often true
(c) Seldom true (d) Almost never true

_____ 9. When I don't succeed, I tend to let it depress me more than I should.
(a) Almost always true (b) Often true
(c) Seldom true (d) Almost never true

_____ 10. I often feel that I am beyond helping.
(a) Almost always true (b) Often true
(c) Seldom true (d) Almost never true

Scoring Key: 1-6: a=1, b=2, c=3, d=4
7-10: a=4, b=3, c=2, d=1

Score: _____

Exercise 7

Place your answer to each of the following questions in the space provided before each number. Remember to add your score, using the key at the end of this exercise.

_____ 1. I hate to wait in lines.
(a) Almost always true (b) Often true
(c) Seldom true (d) Almost never true

_____ 2. I often find myself "racing" against the clock to save time.
(a) Almost always true (b) Often true
(c) Seldom true (d) Almost never true

_____ 3. I become upset if I think something is taking too long.
(a) Almost always true (b) Often true
(c) Seldom true (d) Almost never true

_____ 4. When under pressure I tend to lose my temper.
(a) Almost always true (b) Often true
(c) Seldom true (d) Almost never true

_____ 5. My friends tell me that I tend to get irritated easily.
(a) Almost always true (b) Often true
(c) Seldom true (d) Almost never true

_____ 6. I seldom like to do anything unless I can make it competitive.
(a) Almost always true (b) Often true
(c) Seldom true (d) Almost never true

_____ 7. When something needs to be done, I'm the first to begin even though the details may still need to be worked out.
(a) Almost always true (b) Often true
(c) Seldom true (d) Almost never true

_____ 8. When I make a mistake it is usually because I've rushed into something without giving it enough thought and planning.
(a) Almost always true (b) Often true
(c) Seldom true (d) Almost never true

_____ 9. Whenever possible I will try to do two things at once, like eating while working, or planning while driving or bathing.
(a) Almost always true (b) Often true
(c) Seldom true (d) Almost never true

_____ 10. I find myself feeling guilty when I am not actively working on something.
(a) Almost always true (b) Often true
(c) Seldom true (d) Almost never true

Scoring Key: a=4, b=3, c=2, d=1 Score: _____

Exercise 8

Choose the alternative that best summarizes how you usually react during anxious moments and place your response in the space provided. Then add up your score using the key at the end of this exercise.

When I'm anxious I . . .

_____ 1. Tend to imagine all of the worst possible things happening to me as a result of whatever "crisis" made me anxious to begin with.
(a) Almost always true (b) Often true
(c) Seldom true (d) Almost never true

_____ 2. Do everything I can to resolve the problem immediately; if I don't it will drive me crazy worrying about it later.
(a) Almost always true (b) Often true
(c) Seldom true (d) Almost never true

_____ 3. Will relive in my mind the crisis over and over again even though the crisis may be over and resolved.
(a) Almost always true (b) Often true
(c) Seldom true (d) Almost never true

_____ 4. Will be able to picture the crisis clearly in my mind as long as a week after it's over.
(a) Almost always true (b) Often true
(c) Seldom true (d) Almost never true

_____ 5. Can feel my heart pounding in my chest.
(a) Almost always true (b) Often true
(c) Seldom true (d) Almost never true

_____ 6. Feel my stomach sinking and my mouth getting dry.
(a) Almost always true (b) Often true
(c) Seldom true (d) Almost never true

_____ 7. Notice that I sweat profusely.
(a) Almost always true (b) Often true
(c) Seldom true (d) Almost never true

_____ 8. Notice my hands and fingers trembling.
(a) Almost always true (b) Often true
(c) Seldom true (d) Almost never true

_____ 9. Have difficulty in speaking.
(a) Almost always true (b) Often true
(c) Seldom true (d) Almost never true

_____ 10. Can feel my muscles tensing up.
(a) Almost always true (b) Often true
(c) Seldom true (d) Almost never true

Scoring Key: a=4, b=3, c=2, d=1 Score: _____

INSTRUCTOR QUESTIONNAIRE

INSTRUCTIONS: Below is a list of statements about people. Please indicate how descriptive each statement is of your students. Please rate each each student separately.

	Not at all	Somewhat	Moderately so	Very much so
1. This student sets up a regular study schedule and sticks to it.	1	2	3	4
2. This student requires frequent discipline.	1	2	3	4
3. This student maintains a positive self-image and does not "cut him/herself down" in conversations with others.	1	2	3	4
4. This student recognizes when a decision has to be made, and is systematic in his/her approach to the decision-making process (he/she knows what is important to him/her, gathers information as necessary, and evaluates the risks and benefits of the available options).	1	2	3	4
5. This student displays realistic plans for reaching goals.	1	2	3	4
6. In stressful situations, this student becomes discouraged and tense.	1	2	3	4
7. When needing help or advice, this student approaches and talks to superiors confidently.	1	2	3	4
8. This student uses "I messages" to communicate feelings.	1	2	3	4
9. This student displays confidence in his/her ability to do most of what he/she has to do, or to be able to learn to do what he/she currently cannot do.	1	2	3	4
10. In solving problems, this student develops steps to be accomplished and plans how long each step will take.	1	2	3	4
11. This student attempts to listen actively to what others are saying in a discussion.	1	2	3	4
12. This student makes efforts to relax when in a stressful situation.	1	2	3	4
13. This student is not able to evaluate his/her skills, talents, and abilities realistically.	1	2	3	4
14. This student is able to identify and use when necessary outside help and resources in achieving his/her goals.	1	2	3	4
15. This student attempts to use humor to reduce stress.	1	2	3	4
16. This student's values are inconsistent: there are obvious contradictions in his/her value system.	1	2	3	4
17. This student sets reasonable, reachable goals, both short-term and long-term.	1	2	3	4

STUDENT NAME_____ INSTRUCTOR NAME_____

DATE_____

APPENDIX B

Instructor Training Outline

STUDENT TRAINING ADVISOR (STA) TRAINING

I. Introduction/Orientation - Session #1

A. Purpose of Motivational Skill Training Package

1. Helping students make transition from adolescence to adulthood (Maturity)

2. Giving students concepts and skills for defining themselves, their values and career goals; and for learning to be independent, responsible, and in control through specific skill training in goal setting, stress management, effective communication, problem solving

B. Background of Package

1. Our experience with technical training students in four courses at Lowry led to finding that students who perform poorly lack skills for taking personal responsibility and for motivating themselves

2. Development and evaluation of a package to address these skill deficiencies led to the findings that students receiving the training in the PME course, compared to students not receiving the training, had higher block test scores and lower test failure rates; also higher motivation and involvement in doing well in technical training

3. Current effort is to further explore the effectiveness of this type of training when presented in different formats and with different types of technical training students (in 462 course area)

C. Description of Package

1. Format - consists of seven printed, self-instructional modules of low density with lots of visuals; consumable

2. Length - each module takes about 2 hours to complete

3. Special Features - purpose and use of levels of effort, rationale, key words, and objectives

4. Module topics include:

a. Introduction - to the concepts of personal responsibility and positive self-control

b. Values Clarification - exploring values and beliefs that define what is important to each student

c. Career Exploration - exploring career interests and goals as they relate to military specialty

d. Goal Setting - learning a systematic approach to setting and pursuing goals

e. Stress Management - learning a variety of do, think, and say strategies for managing stress

f. Effective Communication - learning to define one's typical communication style and how to use effective "I" messages and active listening

g. Problem Solving - learning to apply a systematic approach to identifying and solving problems

D. STA Role in Training

1. Assisting students in the learning application of skills and concepts taught in package

2. Monitoring student learning under one of three training methods (Modules only, Modules plus STA, Modules plus STA and small groups)

3. Administering student measures pre- and postskill training; and measures 1 month after training to students in three training groups and in control group (50 students in each group)

4. Filling out evaluations of how well each student is applying skills 1 month after training

5. Keeping lists of students available for training in 462 course and scheduling students to appropriate conditions based on number of days awaiting course entry

a. 1-2 days = Control condition

b. 3 days = Modules Only condition

c. 4 days = Modules plus STA condition

d. 5 days or more = Modules plus STA and Groups condition

E. STA Training Procedures

1. Read seven modules on own

2. Practice skills in group sessions

3. Learn procedures for introducing each module and conducting individual and group training sessions

Questions and Discussion

Homework: Read Student Modules 1 and 2

II. Concepts and Skills in Introduction and Values Modules - Session #2

A. Important Concepts from Introduction Module

1. Maslow's Hierarchy (p. 25-35) - concept of taking responsibility for all our needs

2. Self-Fulfilling Prophecy (p. 40-42) - concept of how positive or negative attitudes influence positive or negative outcomes; role of self-talk and imagination in changing self-image and self-expectancies

3. Being Your Own Coach (p. 43-49) - using the technique of positive self-talk to motivate yourself, to dispel negative attitudes and feelings, and to take positive self-control in potentially negative situations

4. Imagination Exercises (p. 50-51) - power of this technique for developing positive self-image and positive self-fulfilling prophecy

5. Controlling/Changing Bad Attitudes and Beliefs (p. 54-63) - importance of students applying a systematic process in changing negative attitudes and irrational beliefs about themselves and their abilities to take positive self-control

Questions and Discussion

1. STA Role in Modules Only condition - briefly explain purpose of package to students; explain how they are to read package on their own and that STA will be available to answer questions or explain concepts as necessary; monitor student reading of module; when completed, hand out module posttest

2. STA Role in Modules Plus Instructor condition - introduce package; explain what students will get out of it, how the concepts and skills they will learn will help them in the future, and how they are to use the package; introduce important concepts in Introduction Module; monitor student reading of module; when completed, hand out module posttest

3. STA Role in Modules Plus Instructor and Groups condition - conduct activities above (in #2) plus, at end of module, have group discussion

in which students share their self-talk practice exercises and practice imagination skills; monitor student reading of module; when completed, hand out module posttest

B. Important Concepts in Values Module

1. Purpose of Module - concept of the role of values in self-awareness, self-identity, and keeping one's life in balance; emphasize that students' answers are personal and confidential

2. Concept of Values Clarification (p. 6-8) - the idea that we choose what we believe in and think is important; becoming aware of what we value and believe in in various areas helps us exercise control over a fundamental part of our life

3. Values Exercises (p. 9-11) - importance of these exercises in helping students make choices and in integrating and identifying potential values conflicts

4. Self-Contracting (p. 74-77) - power of this technique for helping one to change values and beliefs that are no longer consistent with what the individual wants to become; concept of making a commitment to change

5. Use of Imagination (p. 78) - usefulness of this technique in conjunction with self-contracting, for helping students rehearsing success and developing positive self-fulfilling prophecy

Questions and Discussion

1. STA Role in Modules Only condition - hand out module to students; again explain that STA will be available to answer questions or explain concepts as necessary; monitor student reading of module; when completed, hand out module posttest

2. STA Role in Modules Plus Instructor and Groups condition -introduce important concepts in Values Module prior to handing out; at end of module, have group discussion in which students discuss the "Sharing Your Values" portion (p. 60-63) and share what they wish to in "Values as Goals" portion (p. 64-68); monitor student reading of module; when completed, hand out module posttest

3. STA Role in Modules Plus Instructor and Groups condition -introduce important concepts in Values Module prior to handing out; at end of module, have group discussion in which students discuss the "Sharing Your Values" portion (p. 60-63) and share what they wish to in "Values as Goals" portion (p. 64-68); monitor student reading of module; when completed, hand out module posttest

Homework: Read Student Modules 3 and 4

III. Concepts and Skills in Career and Goal Modules - Session #3

A. Important Concepts from Career Exploration Module

1. Decision Making Skills (p. 7-13) - importance of these skills for making career choices and for taking control over your life; the value of using a systematic decision making process

2. Difference between a Good Decision and a Good Outcome (p. 14) - helping students differentiate between decisions and outcomes in terms of the control that one has over each

3. Influence of Parents on Career Choices (p. 27) - helping students examine how much influence their parents had on their opinions of work, education, and success

4. Self-Directed Search and Occupational Clusters (p. 41-50) - using the SDS to find career clusters that match personality types and interests; identify educational level required by careers of interest

5. Guide for Occupational Exploration (p. 47) - identifying work characteristics, skills, education and training required for occupational clusters of interest

6. Evaluating Risks and Costs (p. 60-61) - value of rating how careers of interest match up with career values as part of making good career decisions

7. Determining how the Military Fits into Overall Career Goals (p. 66) - helping students evaluate how skills learned in their military career field relate to selected careers of interest and how to realistically plan to reach career goals

8. Using Imagination and Self-Talk to Make Critical Decisions (p. 72-73) - importance of imagining success in selected career and of using self-talk to resolve career conflicts

Questions and Discussion

1. STA Role in Modules Only condition - hand out module to students; explain that STA will be available to answer questions or explain concepts as necessary; monitor student reading of module; when completed, hand out module posttest

2. STA Role in Modules Plus Instructor condition - introduce important concepts (#1-8 on preceding page) in Career Exploration module; monitor student reading of module; when completed, hand out module posttest

3. STA Role in Modules Plus Instructor and Groups condition - conduct activities in #2 above, plus at end of module and posttest, have group break into smaller groups and practice decision making skills (share information from exercises on pages 15 through 40), results of SDS (pages 41 through 51), results of evaluating risks and costs (pages 60 through 63), planning skills (pages 67 through 70), resolving conflicts through self-talk (exercise on page 74)

B. Important Concepts from Goal Setting Module

1. Importance of Goals (p. 9-13) - function of goals in motivating individuals to make changes outlined in Values and Career Modules; importance of using a systematic planning process to goal setting; relationship between goal setting, positive self-expectations, being in control, and feelings of self-efficacy; problems some people have in setting goals

2. Goal Setting Process and Skills Involved (p. 15-17) - use of questioning, imagination, positive self-talk, and brainstorming in the goal setting process

3. Writing Goal Statement (p. 21) - importance of positive, definite statements and the use of a baseline

4. Evaluating Costs and Benefits (p. 27) - helping students evaluate costs and benefits associated with each alternative approach to achieving goal selected

5. Preliminary Activities (p. 31) - helping students lay out preliminary activities and dates to be accomplished as a way of insuring progress toward goals

6. Making Contracts and Rewarding Yourself (p. 33-34) - role of rewards in helping to stay motivated to achieve goals; choosing most motivating rewards; making contracts

7. Evaluating Progress (p. 40-42) - helping students identify corrective actions and apply techniques of questioning, imagination, and positive self-talk for positive and negative progress

<u>Questions and Discussion</u>

1. STA Role in Modules Only condition - hand out module to students; explain that STA will be available to answer questions or explain concepts as necessary; monitor student reading of module; when completed, hand out module posttest

2. STA Role in Modules Plus Instructor condition - introduce important concepts (#1-7 on preceding page) in Goal Setting module; monitor student reading of module; when completed, hand out module posttest

3. STA Role in Modules Plus Instructor and Groups condition - conduct activities above, plus when all students have finished the module and posttest, have group practice of brainstorming skills used in Step 2 exercises (p. 26), have them share responses to exercieses on pages 27, 32, and 34, and have discussion of corrective actions that can be taken if they are not making progress toward their goals

Homework: Read Student Modules 5 and 6

IV. Concepts and Skills in Stress and Communication Modules - Session #4

A. Important Concepts from Stress Management Module

1. Definition of Stress (p. 5) - concept that our feelings of stress come from our perception of situations as dangerous or threatening; the individual nature of stress feelings due to different perceptions of situations; emphasize to students that concepts learned in this module can help them more effectively deal with problems they encounter when trying to achieve their goals

2. Signs of Stress and Events Causing Stress (p. 6-11) - helping students learn when they are feeling stressed and to identify whether the stress producing events are inside or outside their control; helping students understand the four factors that determine how much stress a person feels

3. Distinguishing Between Good and Bad Stress (p. 12) - helping students understand how stress can work positively for them

4. Mistaken Beliefs and Stress (p. 18-33) - the role mistaken beliefs play in distorting perceptions of situations and causing feelings of anger or anxiety

5. Managing Stress (p. 38-60) - the use of "do," "think" and "say" strategies for stress management; importance of each student deciding which strategies work best under what kind of situations

6. How Not to Handle Stress (p. 63) - negative effects of techniques which avoid the problem (procrastination, alcohol or drugs)

7. Maintaining Stress Management Skills (p. 64-71) - emphasize that stress management is a process that takes time and practice to perfect; use of worksheets can help students keep in touch with stressful stiuations and practice appropriate stress management strategies

<u>Questions and Discussions</u>

1. STA Role in Modules Only condition - hand out module to students; explain that STA will be available to answer questions or explain

concepts as necessary; monitor student reading of module; when completed, hand out module posttest

2. STA Role in Modules Plus Instructor condition - introduce important concepts (#1-7 above) in Stress Management module; monitor student reading of module; when completed, hand out module posttest

3. STA Role in Modules Plus Instructor and Groups condition - conduct activities in condition #2, plus when all students have finished module and module posttest; have group sharing of Stress Profile and stressful experiences; play relaxation tape and have students practice as a group; share examples from experiences of inappropriate ways to manage stress that students have observed in others - emphasize being constructive and emphathetic; emphasize using worksheets

B. Important Concepts from Effective Communication Module

1. Definition of Effective Communication (p. 2) - concept that this is a skill composed of four parts that can be learned; learning this skill builds self-confidence and helps students take control and provides a technique for them to use in achieving goals and managing stress

2. Exercise 1: How Do I Usually Act? (p. 5-8) - helping students evaluate their typical communication style and identifying areas to work on

3. Distinguishing Among Three Styles of Communication (p. 10-18) - importance of recognizing the differences between assertive, nonassertive, and aggressive styles and the likely outcomes of each style

4. Reasons for Acting Nonassertively and Aggressively (p. 19-22) - helping students understand underlying reasons for these two styles of communicating

5. Benefits of Assertive Communication (p. 23-24) - helping students understand what can be gained by this style

6. Ten Common Rights (p. 27-28) - concept that understanding these rights assists students in being assertive

7. Mistaken Beliefs Preventing Assertive Communication (p. 29-31) - helping students understand that there are mistaken beliefs that prevent them from standing up for their own rights or from respecting the rights of others

8. Effective Talking Skills (p. 37-42) - helping students understand the differences between "you" messages and "I" messages in terms of

their positive versus negative effects; understanding and using the four parts of an effective "I" message and how to use in different situations

9. Effective Listening Skills (p. 47-52) - understanding the role reflection plays in avoiding communication problems; helping students understand how to combine effective talking and effective listening skills

10. Process for Changing Ineffective to Effective Communication Skills (p. 57-64) - importance of applying a systematic process to the problem of changing communication skills; emphasize that changing communication skills is a process that takes time and practice to perfect; use of worksheets can help students track problem situations and identify what to do about them

Questions and Discussion

1. STA Role in Modules Only condition - hand out module to students; explain that STA will be available to answer questions or explain concepts as necessary; monitor student reading of module; when completed, hand out module posttest

2. STA Role in Modules Plus Instructor condition - introduce important concepts (#1-10 on preceding page) in Effective Communication module; monitor student reading of module; when completed, hand out module posttest

3. STA Role in Modules Plus Instructor and Groups condition - conduct activities in condition #2 above, plus when all students have finished module and module posttest, have group sharing of Exercise 1 (p. 5-8), 2 (p. 32-33), 3 (p. 45), and 4 (p. 55-56); have students do role playing of three communication styles, using a situation of your choice; have students practice effective talking and listening skills, using four parts of effective I messages (p. 40)

Homework: Read Student Module 7

V. Concepts and Skills in Problem Solving Module - Session #5

A. Role of this Module as a Summary to the Package

1. Use of a systematic process in identifying values, career interests, goals, sources of stress, communication problems; general importance of this type of process for taking responsibility and being in control

2. How students can use the general approach in this module as a cue to problems and as a cue to go back to particular modules in the package

B. Important Concepts from Problem Solving Module

1. Definition of Problem Solving and the Problem Solving Process (p. 5-6) - the importance of a systematic approach combined with a positive attitude

2. Underlying Skills Involved in Problem Solving (p. 7-8) - helping students understand the use of questioning, imagination, positive self-talk, and brainstorming in the problem solving process; the role of these skills in producing a positive expectancy for success

3. Barriers to Problem Solving (p. 30) - understanding the negative effects of retreating or denying problems

4. Incubation (p. 36) - the value of stepping away from the problem for a while and letting our mind work on the problem

5. Tasks of Adolescence Helped by This Program (p. 39-41) - helping students understand how skills used in this program can help them develop independence, establish personal identity, and achieve sexual maturity; the general value of the skills in the package for taking positive self-control

Questions and Discussion

1. STA Role in Modules Only condition - hand out module to students; explain that STA will be available to answer questions or explain concepts as necessary; monitor student reading of module; when completed, hand out module posttest and other end of training measures

2. STA Role in Modules Plus Instructor condition - introduce important concepts in A and B above; monitor student reading of module; when completed, hand out module posttest and other end of training measures

3. STA Role in Modules Plus Instructor and Groups condition - conduct activities in condition #2 above, but before giving other end of training measures, have group sharing of exercises and techniques they can use to maintain skills learned